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ABSTRACT

The main objective of this study was to develop a measure of belief stereotypy for individuals. This study examined the extent to which popular stereotyped cultural beliefs were incorporated by individuals and investigated the psychological implications of belief stereotypy in a variety of personality, attitudinal, and intellective functions. Two scales for measuring individual belief stereotypy were devised. One scale was comprised of Chinese popular sayings, either in their original form or reworded, expressing stereotypic descriptive or existential beliefs; the other scale was not culture-specific. Data on these scales and other measures were obtained from 230 Hong Kong freshmen students. The results showed that belief stereotypy was positively correlated with authoritarianism, rigidity, dogmatism, conformity, culturcentrism, traditionalism, prejudice against women, and compulsive study orientation, but negatively correlated with academic performance, second-language skills, and verbal intelligence. These results demonstrated the methodological efficacy of using materials already available in the Chinese culture in psychological research which linked the study of individual belief systems with cultural beliefs. (Author/JP)

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Culture-Specific Belief Stereotypy and its Personality, Attitudinal, and Intellective Correlates

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Abstract

This study aims to develop a measure of the belief stereotypy of individuals on the basis of the extent to which popular stereotyped cultural beliefs are incorporated and to investigate the psychological implications of this belief stereotypy in a variety of personality, attitudinal, and intellective functions. Two scales for measuring individual belief stereotypy were devised: The items of one comprised of Chinese popular sayings, either in their original form or reworded, expressing stereotypic descriptive or existential beliefs; items of the other were not culture-specific. Data on these scales and other measures were obtained from 230 Hong Kong university students. The results showed that belief stereotypy significantly correlates positively with authoritarianism, rigidity, dogmatism, conformity, culturocentrism, traditionalism, prejudice against women, and compulsive study orientation, but negatively with academic performance, second-language skills, and verbal intelligence. These results demonstrate the methodological efficacy of using materials already available in the culture in psychological research which links the study of individual belief systems with that of cultural beliefs.

Culture-Specific Belief Stereotypy and its Personality, Attitudinal, and Intellective Correlates

The present study aims to develop a measure of belief stereotypy on the basis of the extent to which popular stereotyped cultural beliefs are incorporated and to explore its psychological implications in personality, attitudinal, and intellective functions. A fundamental distinction is made between individual belief stereotypy and stereotyped cultural beliefs. The former is a psychological construct: It refers to the persistent tendency of individuals to hold beliefs in a rigid, change-resisting, undifferentiated, and oversimplied manner. The latter refers to the enduring beliefs, inclusive or lore, myths and superstitions, that are widely shared by members of a cultural group and yet have never been adequately validated. An investigation of their relationship would provide a linkage between the psychologist's interest in the belief system of individuals and that of the anthropologist in cultural belief systems.

Given the emphasis on the study of attitudes in social psychology, in recent decades the term stereotype has been most often used in reference to interethnic or intergroup prejudicial attitudes. The realm of stereotyped phenomena is much wider, however, including percepts, images, beliefs, attitudes, speech, postural and motor behavior characterized by unindividualized, repetitive, and unvarying modes of expression. A history of the use and definition of the terms

stereotype and stereotypy can be found in Gordon (1962). She devised the Belief Test to sample the nature of beliefs adopted by subjects toward a number of different topics, such as racial types, men and women, religious beliefs, the state and the individual, old age, etc. Analysis of the subjects' TAT records supported the interpretation of stereotypy of imagery and belief as an ego defence against anxiety within the framework of psychoanalytic theory. Rokeach (1960) stressed the need to define and measure the structural properties of belief systems independently of specific ideologies. The Dogmatism scale he developed purports to measure general authoritarianism and general intolerance, or the extent to which a person's belief system is open or closed, i.e.,"the extent to which the person can receive, evaluate, and to act on relevant information from the outside on its own intrinsic merits, unencumbered by irrelevant factors in the situation arising from within the person or from the outside" (p. 57). However, an examination of the items used in the Dogmatism scale reveals that the content of political beliefs is still to a large extent relied upon. Correlations ranging from .36 to .64 were obtained between dogmatism and anxiety (as measured by 30 items from the MMPI)--a result which is consistent with Gordon's interpretation of belief stereotypy as a defence against anxiety.

It occurs to the present investigator that cultural beliefs provide a rich source of materials for studying individual belief systems. A distinctive part of cultural beliefs come to us in the

form of pithy oral expressions--proverbs, saws, maxims, adages, aphorisms, epigrams, and apothegms --all of which can be subsumed generically under popular sayings. These sayings are particularly interesting because they represent succinct formulations of experience that have been handed down from generation to generation and are widely regarded as time-honored wisdom or truth. In short, popular sayings are culture-specific; collectively, they constitute a crystalization of cultural beliefs. In the process of enculturation, each individual incorporates a part of cultural beliefs into his own belief system. The extent to which a person subscribes to popular sayings, therefore, may be construed as a measure of his degree of enculturation and conformity to the prevailing beliefs of his culture. There are dangers, however, in an indiscriminate acceptance of popular sayings as such. Many of the beliefs they express are stereotypic in the sense that they have never been adequately validated and represent truth at best only in an oversimplified or undifferentiated manner.

The use of popular sayings in psychological research is not entirely new. Bass (1958) used them in the development of his Famous Sayings test. No attempt was made to classify the sayings in terms of the kinds of belief expressed. It was assumed that a general or second-order factor, that of acquiescence, permeated the testee's responses to all test items. Of particular interest is the Social Acquiescence scale developed, consisting of items which were

accepted by at least 40% more of the upper (top 25% of the subjects) than of the lower (lowest 25%) criterion group (see also Bass, 1956). The present author would, however, question whether or not the Social Acquiescence scale indeed measures acquiescence. It should be remembered that the effect of acquiescence is demonstrated only when the tendency to agree is found to be present regardless of the content of the measuring instrument. Attempts to measure acquiescence have used a variety of techniques, including item reversal, the use of either ambiguous or bighly abstruse statements, and "contentless" scales or "mish-mash" scales composed of items on so many different topics that they logically do not add up to anything. The volumes of research in such attempts have so far met with failure (Nunnally, 1967). As Nunnally states, "The overwhelming weight of the evidence now points to the fact that the agreement tendency is of very little importance either as a measure of personality or as a source of systematic invalidity" (p. 611).

The logic of the methodology in the present study is in direct opposition to the use of "contentless" measures. It rests on the assumption that the content of the instrument is important in determining how subjects will respond, and that a methodological advantage can be gained by using materials that are identifiable and familiar within the subjects' cultural context. The Chinese language is abound with popular sayings with which one comes into contact in daily life. The decision was therefore made to use a representative sample of Chinese popular sayings expressing beliefs judged to be

stereotypic in the construction of a scale for measuring individual belief stereotypy. In accordance with Rokeach (1968, p. 113), three kinds of beliefs are distinguished: descriptive or existential beliefs (those concerning factual matters and are capable of being either true or false), evaluative beliefs (according to which the object of belief is evaluated as good or bad), and prescriptive or proscriptive beliefs (those advocating a course of action or state of existence as desirable or undesirable). The present investigation is confined to beliefs of the first kind.

Method

Subjects and Procedure

The subjects were all of the 230 first-year students (117 males and 113 females) admitted to the Arts Faculty of the University of Hong Kong in 1970. They were required to take a series of tests devised, administered, and scored by the Language Centre of the University for the purpose of assessing and diagnosing students' proficiency in the English language. In addition, approximately three hours were allocated to the present investigator for the administration of materials he had prepared, all of which were given in groups. Since the amount of time allocated was limited, it was not possible to give all of the materials to every student. Also, some of the students failed to turn up or come on schedule. Consequently, there were some missing data in the measures obtained.

Materials and Measures

The materials used included verbal intelligence tests, belief-stereotypy and other personality and attitude scales. Data on the students' academic performance and English language skills were also obtained. Table 1 gives a summary of the data on the measures obtained. The reliabilities of the instruments used are, on the whole, satisfactory for the purpose of the present research, particularly when it is considered that they are computed for a relatively homogeneous group of university students admitted to the same faculty.

The mode of response and scoring were identical for all of the scales used. The subject was asked to indicate his degree of agreement ("strongly agree," "agree," and "mildly agree") or disagreement with the items. A 7-point scale was used for each item, ranging from 1 to 7 in the direction of the construct being measured, with 4 being omitted. Negative items, where present, were scored in the reverse direction. The subject's score on a particular scale was simply the scores summed over the items of the scale.

Belief Stereotypy. Two scales for measuring stereotypy of beliefs, Belief Stereotypy 1 (BS 1) and Belief Stereotypy 2 (BS 2), were devised by the present investigator. BS 1 is comprised of Chinese popular sayings, either in their original form or reworded. For inclusion in the initial item pool, the following criteria were adopted: (a) popularity--frequently encountered in everyday life, (b) understood by even the illiterate, (c) expresses a descriptive or existential belief, and (d) of doubtful validity. Essentially,

then, each item expresses a culture-specific belief concerning factual matters but is one which does not appear to be consistent with or well-founded in the light of present-day knowledge. The above criteria also apply to BS 2. However, items in this scale are not popular sayings and are not culture-specific, but appear to embody some stereotyped notions or beliefs found in Chinese as well as Western cultures. These items were translated into English.

The initial item pools of BS 1 and BS 2 consisted of 41 items and 23 items respectively, some of which were state in the negative. Those with the highest item-total correlations were selected for inclusion in the final versions of the scales. None of the negative items in the initial item pool of either scale had sufficiently high item-total correlations to warrant inclusion. Consequently, the final versions of the scales consist of only affirmative statements. Examples of BS 1, translated into English, are: "Kind-hearted mothers produce mostly rotten sons"; and "With many sons, a poor family will surely turn rich, while a rich family will surely turn poor." Examples of BS 2 (translated) are: "Theories are useless; only facts count"; and "Reading yellow (pornographic) materials misleads the youth, and causes them to do all sorts of bad things."

Some data were obtained in a preliminary study for a comparison of the two scales, using 32 items and 22 items of the initial item pools of BS 1 and BS 2 respectively. The subjects were 106 first-year students enrolled in the two universities and one of the colleges in Hong Kong, grouped according to whether the student received his

secondary education in a Chinese school (n = 38) or in an Anglo-Chinese school where English is used as the medium of instruction (n = 68). It is generally regarded that the Chinese schools are less subject to Western influence than are the Anglo-Chinese schools. The results showed that the Chinese-educated group had higher means on both of the scales than the English-educated group. However, the difference between means was nonsignificant for BS 1, t = 1.62, but was significant for BS 2, t = 3.49, $p < .01$. This suggests that responses to BS 1 are more resistive to the influence of specific educational experience, supporting the contention that the contents of BS 1, being culture-specific, are more deeply ingrained than are those of BS 2. A correlation of .54 was obtained between the two scales. Correlations between the WAIS Similarities subtest (group administered, with subjects writing down their responses) and the two scales were computed separately for males (n = 33) and females (n = 73): for BS 1, r = -.39 ($p < .05$) and -.05 respectively, and for BS 2, r = -.32 and .16 respectively.

Personality scales. Five scales were used, one each for measuring the following constructs: authoritarianism, rigidity, dogmatism, conformity, and fatalism-superstition. Items taken from three well-known personality scales, the F scale (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950), the Rigidity scale (Gough & Sanford, Note 1; now included in the California Personality Inventory, where it is labeled Flexibility and scored in the reverse direction), and the Dogmatism scale (Form E; Rokeach, 1960) were used for measuring

the first three of these constructs. In translating items of these scales into Chinese, an attempt was made to reverse half of the number of items in each scale used so as to remove the effect of acquiescence. However, this attempt at item reversal failed, as it was found that the total scores of negative items had near-zero correlations (less than .10) with those of the positive items. Consequently, only the translated positive items were retained for subsequent analysis.

An attempt was made to form a Conformity scale, using 23 items of personality inventories which have been found to be associated with Conformity in Crutchfield's (1955) study. According to Crutchfield, the negative items, i.e., those more frequently answered "True" by independent subjects than by conforming subjects, "seem to reflect freedom from compulsion about rules, adventurousness (perhaps tinged with exhibitionism), self-assertiveness, and self-respect"; the positive items "reflect a rather rigid, externally sanctioned, and inconsistent, moralistic attitude," "an intolerance of ambiguity," "conventionality of values," "disturbed, dejected, and distrustful attitudes toward other people." The 23 items were translated into Chinese. Preliminary analysis revealed, however, that the reliability (split-half) of the scale was not satisfactorily high (.45 for 91 males and.48 for 88 females). The pattern of item intercorrelations was then inspected, and 7 items which correlated poorly or negatively with the other items were removed. The remaining 16 items comprising the present Conformity scale has an improved reliability of .56. It should be

pointed out that the Conformity scale does not purport to measure conformity directly, but some of its personality correlates.

The Fatalism-Superstition scale, devised by the present investigator, consists of 8 items, of which 5 were concerned with fatalism and 3 with superstition. Each one of these items is an expression of a fatalistic or superstitious belief characteristic of traditional Chinese society. Examples (translated) are: "The main factor determining success or failure lies in man's efforts and not in the will of the Heaven" (fatalism, negative item); and "The business of fung-shui (geomacy) is something that one cannot refuse to believe" (superstition).

Additionally, ten individual items which may be useful for studying the personality correlates of belief stereotypy were written by the present author. No attempt was made to form a scale out of these items. Examples (translated) can be found in the Discussion section of this paper.

An indication of the cross-language equivalence of the Chinese and English versions of the items is given in the following correlation coefficients obtained between the total scores of the two versions: .84 (for 15 items of the F scale), .70 (for 10 items of the Rigidity scale), .80 (for the initial 23 items of the Conformity scale), and .76 (for the 11 items of BS 2). When the correlations were computed separately for males and females, it was found that those for females were somewhat higher than those for males in all four instances. Also, the means per item and standard deviations per item of the two versions of BS 2, Rigidity, and Conformity scales do not differ very much, but

the mean per item of the translated version of the F scale is somewhat higher than that of the original version (see Table 1).

Attitude scales. Four scales were devised by the present investigator, one each for measuring the following attitudinal objects: Chinese civilization, the accomplishments of the ancients, women, and studying as an activity. The Culturocentrism scale measures the conviction in the pliable endurance and superiority of Chinese civilization (in its spiritual, but not its material, aspects) to that of other nations or peoples. For lack of a better term, "culturocentrism" is coined. It differs from patriotic nationalism, which stresses the love and devotion to one's country, from ethnocentrism, which has the connotation of intolerance and prejudice towards other ethnic groups, and from racism, which asserts the biological superiority of one racial group over others. Examples (translated) are: "Whatever racial group that comes to invade China will surely become acculturated (to the Chinese way of life)"; and "China is behind in the material aspects of civilization; in the spiritual aspects, she is also not necessarily ahead of the West" (negative item).

The Traditionalism scale measures the orientation which glorifies the accomplishments of the ancients (of China) as being unsurpassed or unsurpassable by the moderns, and stressed the moral dangers of departing from the teachings of ancient sages. Examples (translated) are: "The morality of the times is becoming decadent day by day because people have abandoned the teachings of the sages'; and "We shall very likely surpass the ancients' accomplishments in many aspects of

learning and culture" (negative item).

The Prejudice Against Women scale measures the extent to which negative, even distrustful or contemptuous, attitudes are held towards women. It embodies some of the chauvinistic attitudes that have been commonly held against women, by both men and women, in traditional Chinese society. Evidence for the validity of this scale is seen in its negative correlation with sex, indicating that, as expected, women scored significantly lower than males, r (189) = -.48, $p < .001$ (see Table 3). Examples (translated) are: "It is difficult to tell just what is in a women's heart"; and "In terms of intelligence and character, it does not appear that women are inferior to men" (negative item).

The Study Orientation scale measures the "compulsive" orientation in study which stresses believing in what the book says, the hardship of learning, and the need for memorization, compulsion, and punishment in the learning process. Examples (translated) are: "The best method of study is to memorize the books by heart"; and "The pursuit of knowledge is meant to be a kind of enjoyment, and ought not be looked upon as hardship" (negative item).

Intellective measures. Grade point averages (GPAs) were computed for three separate examinations, the matriculation examination (which is also the entrance examination of the University), the first-year examination in 1970, and the final degree examination in 1973. In addition, the grades for five of the subjects in the matriculation examination were recorded. (Different students took different subjects in this examination.) From the series of language tests of the Language

Centre, four composite scores in English language skills were obtained: reading, writing, listening, and speaking.

Verbal intelligence was measured by two tests in Chinese, the Idioms Test (IT) and the Proverbs Test (PT), which were constructed by the present investigator. The IT consists of 40 items, each one of which has 5 four-character Chinese idioms, and the subject is asked to choose 2 from among these 5 that he thinks are most similar in meaning. The scoring is objective, since only one answer is the correct one for each item. The PT consists of 17 popular Chinese proverbs, and the subject is asked to explain the meaning of each as fully as he can. Responses are scored on a 4-point scale ranging from 0 to 3. Some data on the two tests have already been reported elsewhere. The most important evidence for validity is that raw test scores correlate substantially with age (.41 for the IT for 1,939 school childrrn, and .55 for the PT for 1,747 school children--Ho, Note 2). The tests also correlate significantly, though lowly, with the academic performance of school children (Ho, Note 2) and with measures of English language skills in university students (Ho, Note 3).

Results

To obtain a single measure of belief stereotypy, an unweighted linear combination was formed by adding the scores of BS 1 and BS 2. This is justified, since the two scales are substantially correlated, r (161) = .56, $p < .001$ (see Table 2). The resulting linear combination has an estimated alternative-form reliability of .87.

The correlations between the four measures of belief stereotypy, BB 1 + BS 2, BS 1, BS 2, and BS 2 (English), and the other variables are given in Table 2. An inspection of this table reveals the following patterns of correlations.

1. With each of the other variables considered singly, correlations of approximately the same order of magnitude are obtained regardless of which one of the four measures of belief stereotypy is used.

2. Belief stereotypy correlates substantially with the personality dimensions of authoritarianism, rigidity, dogmatism and conformity.

3. Positive, low, but significant correlations are obtained between belief stereotypy and culturocentrism, traditionalism, prejudice against women, and compulsive study orientation.

4. Negative, low, but significant correlations with belief stereotypy are obtained for both English language skills and academic performance. With respect to different academic subjects, it is of interest note that the magnitude of the correlations is consistently somewhat larger with English language subjects than with Chinese language subjects, and with English literature than with English history.

5. Belief stereotypy correlates negatively with verbal intelligence, although the correlations are low and reaching statistical significance with only the IT.

6. Belief stereotypy appears to be negatively correlated with fatalism-superstition, but the correlations are very small and reaching statistical significance only for BS 2 and BS 2 (English).

7. Sex does not appear to be correlated with belief stereotypy, although the correlations are consistently negative and reaching statistical significance for BS 2.

The matrix of correlations among sex, personality, attitudinal, and verbal intelligence variables is presented in Table 3. An inspection of this table reveals that (a) the personality and attitudinal variables are positively intercorrelated (excepting that between the English version of Rigidity and Fatalism-Superstition), with all correlations larger than .40 being those among the personality variables (excluding Fatalism-Superstition), and (b) verbal intelligence and sex are in the majority of instances negatively correlated with the personality and attitudinal variables, but the correlations are mostly very low and nonsignificant (negative correlations range from -.04 to -.29 for verbal intelligence, and from -.01 to -.48 for sex--indicating that females obtained lower scores).

Factor Analysis

BS 1 and BS 2, together with the personality and attitudinal scales (excluding Prejudice Against Women and Study Orientation) were treated as a group of variables and subjected to factor analysis, using the method of principal-factor solution with iteration followed by varimax rotation. The communalities and loadings of the three factors that emerged are given in Table 4.

Factor I appears to be generally a personality factor, with high loadings on belief stereotypy, authoritarianism, rigidity, dogmatism,

and conformity. Factor II seems to be culture-specific, in that the three variables with the highest loadings on it (BS 1, culturo-centrism, and traditionalism) all pertain specifically to some aspect of Chinese culture. The fact that BS 2 has a loading smaller than that of BS 1 on this factor lends support to the contention that these two scales have different contents on the dimension of cultural specificity—nonspecificity. Factor III may be named a Fatalism-Superstition factor, although it also has substantial negative loadings on belief stereotypy. It is worthy to note that belief stereotypy has substantial positive loadings on both Factors I and II, indicating that it is factorially discriminable from the other personality dimensions (none of which are substantially loaded on factor II).

Discussion

The results of the present study have demonstrated that the psychological implications of belief stereotypy are manifest in a variety of measures--of academic performance, second-language skills, verbal intelligence, and, as expected, particularly attitudes and personality. These results are consistent with those reported by Bass (1956, 1961) and Vidulich and Bass (1960), but the magnitude of the correlations obtained in the present study tends to be higher than those between the Social Acquiescence scale and measures of ability, sociality, and social sensitivity (Bass, 1956). The

image of the person high in belief stereotypy that emerges is that of an unquestioning and noncreative social conformer who subscribes to conventional and authoritarian values and believes in the unchanging order of things. Change, novelty, and ambiguity are likely to be distasteful and would present difficulties to him. This image bears a close resemblance to the closed-minded individual that Rokeach (1960) has characterized.

The personality characteristics of high belief stereotypers can be further illustrated by examing their responses to individual personality items. To do this, subjects were grouped into high, medium, and low groups according to their scores on BS 1. Items found to be associated with conformity in Crutchfield's (1955) study (indicated by "C" in parentheses) and the ten additional items written by the present investigator were examined. The following are some of the items on which the high stereotypy group had significantly higher means (at the .05 level or above) than the low stereotypy group.

1. A dogmatic-traditional orientation, perhaps coupled with the readiness to take a tough stand to or resort to force, is clearly manifest in the items:

To eradicate teachings which differ from the approved orthodoxy is the responsibility of every proper and well-bred person.

It is foolish to cast doubt upon moral principles which have been accepted for generations.

Everyone must come to believe in the same truths, if our world is to become a better place.

We should defend all attacks against our tradition from

within and without our country.

2. Authoritarianism value in:

I am in favor of very strict enforcement of all laws, no matter what the consequences. (C)

3. Cynicism in:

Most people are honest chiefly through fear of being caught. (C)

4. Guilt and inferiority feelings in:

I often feel as though I have done something wrong or wicked. (C)

When I meet a stranger, I often think that he is better than I am. (C)

5. Escapism in:

I often think, "I wish I were a child again." (C)

6. Compulsivity in:

My mind would get confused when my surrounding is not in order.

Perfect balance is the essence of all good composition. (C)

7. Finally, lack of creativity in:

I like to fool around with new ideas, even if they turn out later to be a total waste of time. (C, negative item)

Contrary to expectation, belief stereotypy does not correlate positively with fatalism-superstition. In fact, they are slightly correlated negatively. The factor analysis indicates, furthermore,

that belief stereotypy has negative loadings on Factor III, which comes close to being a relatively pure Fatalism-Superstition factor. One plausible explanation for this result is that the rejection of fatalistic and superstitious beliefs has become the norm among the educated in Hong Kong society (as can be seen from the relatively low mean per item of the Fatalism-Superstition scale in Table 1); therefore, an open subscription to these beliefs, unlike those expressed in BS 1, are no longer stereotypic as they once were. A different result could have been obtained if a sample of low-education subjects were used.

A "conservative" (culturocentric and backward looking) mentality is reflected in the attitudes of high stereotypers, in that they tend to be less able to appreciate cultures other than their own, and to cling onto a sense of pride in the accomplishments of the ancients. They look to the distant past, rather than the present or the future, for inspiration and confidence. It is also of significance to note that prejudice against women is found to be greater in high stereotypers.

The evidence also indicates that intellective functioning is generally affected by belief stereotypy. High stereotypers tend to be more "compulsive" in their study orientation, suggesting that they probably find it more difficulty to cope with academic learning at the university level which puts a premium on independence and critical thinking ability. This is confirmed by the result that high stereotypers do less well academically than low stereotypers. High stereotypers also have greater difficulty in second-language learning.

This is consistent with Lambert's (1965) finding in a factor analytic study that one of the factors extracted obviously tapping the autocratic syndrome (as measured by the F scale) also reflected an inability to take on the speech characteristics of the other-language community. With regard to verbal intelligence, it should be noted that significant negative correlations with belief stereotypy are obtained with the IT but not with the PT. This result indicates that high and low stereotypers do not differ in their ability to undetstand and explain the meaning of proverbs, but that high stereotypers have greater difficulty in dealing with the intellective task required of the IT, i.e., to deal simultaneously with all of the elements in a set singly and in combination. (The IT is a particularly difficult test, in view of the fact that each of the 5 idioms in an item are pregnant with meaning, and that the probability of choosing a right answer by chance is only 1 in 10--since there are 10 possible combinations of 2 elements from a set of 5.) It seems reasonable to state that high stereotypers have greater difficulty in dealing with alternatives of a high complexity level.

In conclusion, the present research has demonstrated the methodological efficacy of using materials that are already available in the culture, rather than newly "invented" materials, in constructing tools for the psychological research. It is true that the scales developed for measuring belief stereotypy do not measure the organization of beliefs or the process by which these beliefs are arrived at, but the end product of the process. Nevertheless, it can be said that these

scales, which require no more than 10 to 15 minutes to administer, provide a meaningful and economic way of tapping individual cognition in relation to culture. Further investigation is indicated especially in placing belief stereotypy in the context of the growing body of research in cognitive styles, complexity, and organization. The results obtained in the present study serve as an illustration of the proposition that personality and intelligence are largely a matter of culture internalized. Each person inherits ~~the~~ a wealth of cultural beliefs that shape his cognition, but it is also incumbent upon him to select, distil, and incorporate into the self those elements that stand the test of rational analysis or scientific validation.

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Table 1 26

Reliabilities of Measuring Instruments, with Means, Standard Deviations, and Numbers of Subjects and Items

Instrument[a]	N		M per item[c]	SD per item[c]	r[d]
	Subject	Item[b]			
Belief Stereotypy					
BS 1	191	20	4.05	.79	.86
BS 2	171	11	4.06	.83	.69
BS 2 (E)	83	11	4.04	.86	.71
BS 1 + BS 2	161	31	4.01	.70	.87[e]
Personality					
F	188	15	4.52	.65	.59
F (E)	89	29	4.00	.71	.77
Rigidity	176	10	4.09	.74	.59
Rigidity (E)	51	20	3.94	.81	.84
Dogmatism	174	14	3.91	.68	.68
Conformity	184	16(5)	4.08	.62	.56[f]
Conformity (E)	42	23(7)	4.11	.52	.39
Fatalism-Superstition	188	8(3)	2.78	.83	.77[f]
Attitude					
Culturocentrism	189	5(1)	4.49	1.03	.69[f]
Traditionalism	189	5(1)	2.70	.80	.51[f]
Prejudice Against Women	189	7(2)	2.72	.87	.71[f]
Study Orientation	189	6(3)	2.36	.72	.56[f]
Verbal intelligence					
Idioms Test	190	40	22.04	6.10	.89[f]
Proverbs Test	89	17	29.91	6.32	.80

[a](E) = English version.

[b]Numbers in parentheses indicate the number of negative items.

[c]Except for the Idioms Test and the Proverbs Test, for which the *M*s and the *SD*s of total scores are given.

[d]Odd-even reliabilities, unless indicated otherwise.

[e]Estimate of alternative-form reliability of the linear combination.

[f]Reliabilities estimated from item statistics, using the Spearman-Brown formula.

Table 2

Correlations Between Belief Stereotypy Scales

and Other Variables

Variable[a]	Belief Stereotypy			
	BS 1 + BS 2	BS 1	BS 2	BS 2 (E)
Sex[b]	-07	-02	-15*	-14
Personality				
F	27**	22**	22**	42**
F (E)	54**	53**	44**	55**
Rigidity	37**	34**	30**	29**
Rigidity (E)	61**	57**	63**	55**
Dogmatism	37**	33**	30**	52**
Conformity	46**	38**	41**	47**
Conformity (E)	47**	42**	43**	47**
Fatalism-Superstition	-07	-05	-19*	-26*
Attitude				
Culturocentrism	32**	30**	26**	28**
Traditionalism	37**	38**	23**	32**
Prejudice Against Women	23**	15*	25**	09
Study Orientation	29**	22**	31**	17
English language skills				
Reading	-24**	-19**	-20**	-21
Writing	-21**	-16*	-17*	-26*
Listening	-16*	-18*	-19*	-22*
Speaking	-17*	-05	-25**	-22

Table 2 (cont.)

Variable[a]	Belief Stereotypy			
	BS 1 + BS 2	BS 1	BS 2	BS 2 (E)
Academic performance				
Matriculation subjects				
Use of English	-23**	-16*	-19*	-04
English literature	-30*	-29**	-23	-27
English history	-07	-04	-08	-13
Chinese history	-05	-04	03	18
Chinese language and literature	-09	02	-15	05
Matriculation GPA	-24**	-19**	-22**	-09
First-year GPA	-11	-11	-11	-17
Final examination GPA	-09	-10	-10	-17
Verbal intelligence				
Idioms Test	-37**	-36**	-30**	-23
Proverbs Test	-10	01	-17	--
Belief stereotypy				
BS 1	94**	--	56**	62**
BS 2	81**	56**	--	76**
BS 2 (E)	67**	62**	76**	--

Note. Two-tail tests of significance were used. The levels of significance have been adjusted to take into account of the losses of df from pairwise deletion of missing data. Decimals were dropped.

[a](E) = English version.

[b]Male = 1, Female = 2.

*$p < .05$.

**$p < .01$.

Table 3

Correlation Matrix of Sex, Personality, Attitudinal, and Verbal Intelligence Variables

Variable[a]	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Sex[b]														
2. F	-10													
3. F (E)	02	75**												
4. Rigidity	-01	23**	49**											
5. Rigidity (E)	-10	35**	69**	47**										
6. Dogmatism	-24**	41**	61**	35**	34**									
7. Conformity	-11	46**	56**	40**	45**	46**								
8. Conformity (E)	-26	31	61**	61**	64**	25	72**							
9. Fatalism-Superstition	16*	20**	10	08	-10	10	18*	19						
10. Culturocentrism	-19**	03	13	04	17	13	23**	19	09					
11. Traditionalism	01	14	26*	17*	18	20**	25**	34*	19**	35**				
12. Prejudice Against Women	-48**	28**	30**	23**	21	27**	30**	36*	12	22**	19**			
13. Study Orientation	-15*	20**	36**	13	14	15	32**	26	04	13	22**	29**		
14. Idioms Test	-01	-07	-18	-12	-17	-10	-18*	-05	14	-12	-12	-17*	-09	
15. Proverbs Test	20	-08	--	09	---	-04	01	-25	-07	08	05	-29**	07	28**

Note. Two-tail tests of significance were used. The levels of significance have been adjusted to take into account the losses of df from pairwise deletion of missing data. Decimals were dropped.

[a] (E) = English version.

[b] Male = 1, Female = 2.

* $p < .05$.

** $p < .01$.

Table 4

Loadings and Communalities of Rotated Factor Matrix

Variable	Loading			h^2
	Factor I	Factor II	Factor III	
BS 1	.42	.54	-.32	.56
BS 2	.45	.39	-.52	.62
Authoritarianism	.62	.02	.15	.40
Rigidity	.50	.14	-.08	.27
Dogmatism	.62	.15	.01	.40
Conformity	.71	.25	.05	.57
Fatalism-Superstition	.17	.14	.60	.41
Culturocentrism	.06	.56	.01	.32
Traditionalism	.16	.62	.13	.42

Note. N = 230. There were, however, losses of df due to missing data. A conservative estimate of the effective N is 150. Correlation coefficients were computed from pairwise deletion of missing data, but in fact do not differ very much from those computed based on listwise deletion (i.e., deleting all cases where data are missing in one or more of the variables, a procedure which is much more wasteful of data).